

CLAIMS

1. A radiation detector comprising:

a main body; and

a radiation detection probe connected to the main
5 body, the radiation detection probe including:

a radiation detection element for detecting
radiation transmitted through the distal end of the
radiation detection probe;

a light-emitting device for emitting pointer
10 light toward the distal end of the radiation detection
probe; and

a first window provided on the distal end of the
radiation detection probe to transmit the pointer light.

2. The radiation detector according to Claim 1,
15 wherein

the radiation detection element is disposed
between the distal end of the radiation detection probe
and the light-emitting device,

the radiation detection element has a second
20 window for transmitting the pointer light, and

the pointer light passes through the second
window and then the first window to be emitted from the
radiation detection probe.

3. The radiation detector according to Claim 2,
25 wherein

the radiation detection element is divided into a

plurality of element pieces which are arranged to surround the second window.

4. The radiation detector according to any one of Claims 1 to 3, wherein the radiation detection probe
5 further includes a condenser lens provided in the first window.

5. The radiation detector according to any one of Claims 1 to 4, further comprising an optical guide for guiding the pointer light from the light-emitting
10 device to the first window.

6. The radiation detector according to Claim 5, wherein

the optical guide has a pipe extending from the light-emitting device to the first window.

7. The radiation detector according to Claim 6, wherein an optical fiber is placed in the pipe.
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8. The radiation detector according to any one of Claims 5 to 7, wherein

the radiation detection probe further includes an
20 light-blocking cover which covers the light-emitting device, and

the optical guide has a through-hole provided in the light-blocking cover.

9. The radiation detector according to any one
25 of Claims 1 to 8, wherein the radiation detection probe further includes a collimator disposed between the

distal end of the radiation detection probe and the radiation detection element to collimate the radiation.

10. The radiation detector according to Claim 9, wherein the first window is placed on the center axis of the collimator.

11. The radiation detector according to any one of Claims 1 to 10, wherein

the radiation detection probe further includes an input plate provided on the distal end of the radiation detection probe,

the first window is a through-hole provided in the input plate, and

the input plate blocks an electromagnetic wave having an energy of 1 keV or less.